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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,957	09/10/2003	Anthony Tseng		8993

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EXAMINER

THEISEN, DOUGLAS J

ART UNIT PAPER NUMBER

1724

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/658,957	Applicant(s) TSENG, ANTHONY	
	Examiner Douglas J. Theisen	Art Unit 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 57-64 and 66-88 is/are allowed.
- 6) ☒ Claim(s) 36, 40, 42, 46, 49, 52, 53, 56 and 65 is/are rejected.
- 7) ☒ Claim(s) 37-39, 41, 43-45, 47, 48, 50, 51, 54, and 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>091003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

2. This application repeats a substantial portion of prior Application No. 10/161,296, filed 3 June 2002 and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should

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describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it is not descriptive of a degasification process for a liquid or descriptive of a degasifying means for a liquid.

Correction is required. See MPEP § 608.01(b).

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 46 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 46 recites the limitation "gas free electrolyzed liquid" in line 4. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 65 recites the limitation "gas free electrolyzed liquid" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 36, 40, 42, 49, 52, 53, and 56 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent no. 6,454,835 to Baumer. Baumer describes a gas-liquid separator comprising at least two containers, a first container for separating gas from a gas-liquid mixture (separation chamber 16) and a second container for receiving gas reduced or gas free liquid (supply tank 14), the first container having an inlet port for the gas-liquid mixture (inlet port 1), an outlet port for the gas reduced or gas free liquid at a location below the level of the gas in the first container (connection between chamber 16 and tank 14), a separate gas outlet port (port 22), and a volume above the outlet port for the gas reduced or gas free liquid enough to hold a volume of the separated gas prior to discharge to the gas outlet port (space above 5), the second container receiving gas reduced or gas free liquid through an inlet port having a dimension sufficient to hold a volume of liquid enough to exert pressure on the gas-liquid mixture inside the first container (the level of liquid in tank 14 is higher than the level of liquid in chamber 16 and is capable of exerting pressure on the gas-liquid mixture in chamber 16) thereby directing the separated gas to escape from the gas outlet port of the first container while

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allowing the gas reduced or gas free liquid to exit at a separate outlet of the second container (tank 14 is a supply tank for liquid , so it is inherent that it has an outlet). Baumer further describes a means (filter 18) for preventing the recombination of the separated gas from the gas reduced or gas free liquid and for maintaining the separation of the gas from the liquid. Baumer describes a gas-liquid separator connected to a source of a gas-liquid mixture (inlet port 1). Baumer describes valves and regulators for controlling pressure and flow of the liquid or gas (pressure regulator 20 or one or more check valves). It is inherent that Baumer would use a material compatible with the separated gas and the gas-liquid mixture. Baumer describes that the separated gas is non-toxic (air). See Fig. 2 and column 2, line 35 to column 4, line9.

Allowable Subject Matter

12. Claims 57-64 and 66-88 are allowed.
13. Claim 46 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
14. Claim 65 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
15. Claims 37-39, 41, 43-45, 47, 48, 50, 51, 54, and 55 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
16. The following is a statement of reasons for the indication of allowable subject matter: The reasons for the indication of allowable subject matter are that the closest

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prior art to Baumer describes a gas-liquid separator comprising at least two containers, a first container for separating gas from a gas-liquid mixture (separation chamber 16) and a second container for receiving gas reduced or gas free liquid (supply tank 14), the first container having an inlet port for the gas-liquid mixture (inlet port 1), an outlet port for the gas reduced or gas free liquid at a location below the level of the gas in the first container (connection between chamber 16 and tank 14), a separate gas outlet port (port 22), and a volume above the outlet port for the gas reduced or gas free liquid enough to hold a volume of the separated gas prior to discharge to the gas outlet port (space above 5), the second container receiving gas reduced or gas free liquid through an inlet port having a dimension sufficient to hold a volume of liquid enough to exert pressure on the gas-liquid mixture inside the first container (the level of liquid in tank 14 is higher than the level of liquid in chamber 16 and is capable of exerting pressure on the gas-liquid mixture in chamber 16) thereby directing the separated gas to escape from the gas outlet port of the first container while allowing the gas reduced or gas free liquid to exit at a separate outlet of the second container (tank 14 is a supply tank for liquid, so it is inherent that it has an outlet). Baumer further describes a means (filter 18) for preventing the recombination of the separated gas from the gas reduced or gas free liquid and for maintaining the separation of the gas from the liquid. Baumer describes a gas-liquid separator connected to a source of a gas-liquid mixture (inlet port 1). Baumer describes valves and regulators for controlling pressure and flow of the liquid or gas (pressure regulator 20 or one or more check valves). It is inherent that Baumer would use a material compatible with the separated gas and the gas-liquid mixture. Baumer describes that the separated gas is non-toxic (air). Baumer does not describe that the containers

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have different geometric shapes. Baumer does not describe that the second container is an outer container and the first container is an inner container, the outer container having an inside surface larger than the outside surface of the inner container. Baumer does not describe that the first container is as wide as possible and as short as possible in relation to the second container and having the gas outlet port for the separated gas farthest from the inlet port of the gas-liquid mixture. Baumer does not describe that the first container is adjacent to the second container having a common wall partitioning the first and second containers and a common open channel between the first and second containers. Baumer does not describe that the gas-liquid separator is prefilled with gas reduced or gas free liquid prior to separating gases from a gas-liquid mixture. Baumer does not describe that a level switch having a detecting component is placed inside the first container, the level switch connected to a vacuum pump. Baumer does not describe a means for withdrawing the separated gas from the first container or a vacuum pump connected to the gas outlet port of the first container and an additional open port for allowing air or gas to enter the container when the vacuum pump is used. Baumer does not describe that the source of the gas-liquid mixture is electrolyzed liquid from a chamber of an electrolysis cell. Baumer does not describe a gas-liquid separator further comprising a gas monitor or a gas leak detector. Baumer does not describe a gas-liquid separator further comprising a feedline to a container for collecting the separated gas for further processing or recovery.

17. Baumer describes a method for separately collecting gas from a gas-liquid mixture using a gas-liquid separator comprising introducing a gas-liquid mixture into the inlet port of a first container of the gas-liquid separator, the liquid flowing from the first container to a second container from an outlet port for the gas reduced or gas free liquid

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at the first container to an inlet port for the gas reduced or gas free liquid of the second container as gas separates from the gas-liquid mixture and collects and discharges at a gas outlet port of the first container; continuously flowing the gas reduced or gas free liquid from the first container into the second container until the separation of the gas from the gas-liquid mixture is completed, keeping the level of the liquid in the second container above the level of liquid in the first container to a volume sufficient to provide enough pressure to keep the separated gas collecting and discharging at the gas outlet port of the first container; continuously collecting the gas reduced or gas free liquid from an outlet of the second container; and, continuously collecting the separated gas from the gas outlet port of the first container. Baumer does not describe introducing the gas-liquid mixture into the inlet port of the first container of the gas-liquid separator at a rate greater than or equal to the flow of the gas reduced or gas free liquid from the gas-liquid separator. Baumer does not describe withdrawing the gas collecting at the volume above the outlet port for the gas reduced or gas free liquid holding the separated gas prior to discharge from the gas outlet port by a vacuum pump, the withdrawal by the vacuum pump simultaneously drawing air or gases through the second inlet port to maintain the pressure at the first container.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Theisen whose telephone number is 571-272-

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1168. The examiner can normally be reached on Monday, Tuesday, and Wednesday 6:30 until 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

djt

DUANE SMITH
PRIMARY EXAMINER

[Handwritten signature]
1-19-05